abcam

ab315082

Anti-LXR beta/NER antibody [EPR24051-104]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24051-104
Purification technique	Affinity purification Protein A
Concentration	0.518 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500

Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Mouse, Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information NR1H2

Function	Nuclear receptor that exhibits a ligand-dependent transcriptional activation activity (PubMed:25661920). Binds preferentially to double-stranded oligonucleotide direct repeats having the consensus half-site sequence 5'-AGGTCA-3' and 4-nt spacing (DR-4). Regulates cholesterol uptake through MYLIP-dependent

ubiquitination of LDLR, VLDLR and LRP8; DLDLR and LRP8. Interplays functionally with RORA for the regulation of genes involved in liver metabolism (By similarity). Induces LPCAT3-dependent phospholipid remodeling in endoplasmic reticulum (ER) membranes of hepatocytes, driving SREBF1 processing and lipogenesis (By similarity). Via LPCAT3, triggers the incorporation of arachidonate into phosphatidylcholines of ER membranes, increasing membrane dynamics and enabling triacylglycerols transfer to nascent very low-density lipoprotein (VLDL) particles (By similarity). Via LPCAT3 also counteracts lipid-induced ER stress response and inflammation, likely by modulating SRC kinase membrane compartmentalization and limiting the synthesis of lipid inflammatory mediators (By similarity). Plays an anti-inflammatory role during the hepatic acute phase response by acting as a corepressor: inhibits the hepatic acute phase response by preventing dissociation of the N-Cor corepressor complex (PubMed:20159957).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Liver X Receptor Beta (LXR beta) also known as NR1H2 is a nuclear receptor that functions as a transcription factor. It has a molecular mass of approximately 51 kDa. This receptor is primarily expressed in tissues like liver kidney adipose tissue and macrophages. LXR beta regulates genes involved in cholesterol homeostasis lipid metabolism and inflammation. Additionally LXR beta forms heterodimers with Retinoid X Receptors (RXRs) to regulate gene expression in response to ligands.
Biological function summary	The protein plays a central role in the maintenance of lipid homeostasis and modulation of inflammatory responses. LXR beta acts within a complex system that also involves other nuclear receptors and co-regulators to effectively control gene transcription. Through its activity LXR beta impacts cholesterol efflux fatty acid synthesis and inflammatory gene expression. It helps preserve cellular lipid balance a critical factor for normal cellular function and overall organism health.
Pathways	LXR beta plays a significant role in the cholesterol metabolism and lipid homeostasis pathways. It activates the transcription of genes like ABCA1 and ABCG1 important for cholesterol efflux in macrophages and other cell types. LXR beta interacts closely with proteins such as SREBP-1c (Sterol Regulatory Element Binding Protein 1c) and RXR which are integral to lipid metabolism pathways. By modulating these pathways LXR beta contributes to reverse cholesterol transport reducing cholesterol overload in cells.
Associated diseases and disorders	LXR beta has connections to atherosclerosis and metabolic syndrome. Alterations in LXR beta function can lead to impaired cholesterol efflux and excessive lipid accumulation contributing to atherosclerosis. In metabolic syndrome irregularities in LXR beta's regulation of lipid metabolism may exacerbate the disorder's associated risks. Its interaction with proteins like GM-CSF (Granulocyte-Macrophage Colony-Stimulating Factor) further highlights the target's potential role in inflammatory conditions linked to these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

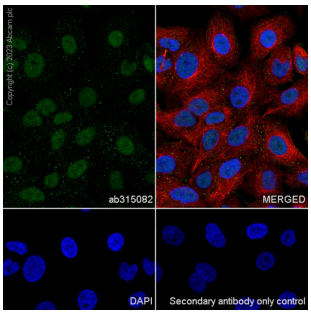
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



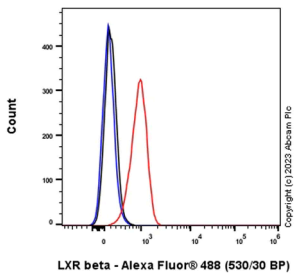
Immunocytochemistry/ Immunofluorescence - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized A549 (human lung carcinoma epithelial cell) cells labelling LXR beta/NER with ab315082 at 1/100 (5.18 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2 ug/ml) dilution (Green).

Confocal image showing nuclear and cytoplasmic staining in A549 cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8).

ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue).

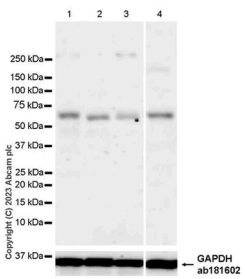
Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2 ug/ml) dilution.



Flow Cytometry (Intracellular) - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized A549 (human lung carcinoma epithelial cell) cells labelling LXR beta/NER with ab315082 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082) at 1/1000 dilution

Lane 1:

Human liver tissue lysate at 20 µg

Lane 2:
Mouse lung lysate at 20 µg

Lane 3:
Mouse small intestine lysate at 20 µg

Lane 4:
Rat liver tissue lysate at 20 µg

Secondary

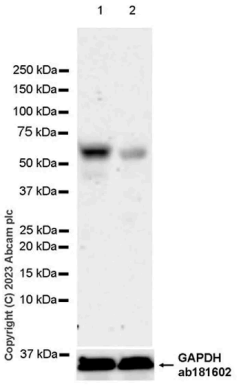
Lane 1:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Lanes 2 - 4:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Observed band size: 60 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082) at 1/1000 dilution

Lane 1:
A549 (human lung carcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:
A549 transfected with siRNA specifically targeting LXR beta whole cell lysate at 20 µg

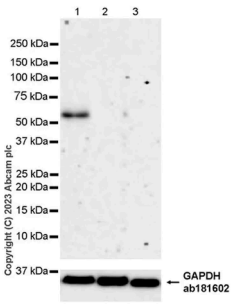
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Observed band size: 60 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Low expression: SW620 (PMID: 26450852), HCT116 (PMID: 26450852).

In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.

All lanes:
Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082) at 1/1000 dilution

Lane 1:
SW480 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
SW620 (human colorectal adenocarcinoma epithelial cell) whole cell lysate at 20 µg

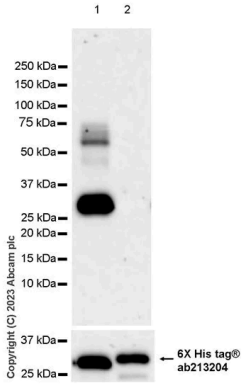
Lane 3:
HCT116 (human colorectal carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Observed band size: 60 kDa

Exposure time: 180s



Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

This antibody does not cross-react with human LXR alpha.

In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution.

All lanes:
Western blot - Anti-LXR beta/NER antibody [EPR24051-104] (ab315082) at 1/1000 dilution

Lane 1:
His-tagged human LXR beta fragment at 10 ng

Lane 2:
His-tagged human LXR alpha fragment at 10 ng

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 30 kDa

Exposure time: 180s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.